# CACTUS AND SUCCULENT JOURNAL

**Of the Cactus And Succulent Society Of America**

VOL. I AUGUST, 1929 No. 2

*Ferocactus acanthodes*

# Journal of the CACTUS & SUCCULENT SOCIETY of America

*A monthly magazine devoted exclusively to Cacti and Succulents for the dissemination of knowledge and the recording of hitherto unpublished data in order that the culture and the study of these particular plants may attain the popularity which is justly theirs. "The Cactaceae," by N. L. Britton and J. N. Rose, has been adopted by this Journal for purposes of identification.*

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## CONTENTS




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THE CACTUS AND SUCCULENT SOCIETY OF AMERICA

# THE GENUS PERESKIA

By Dr. Arthur D. Houghton

*The demand of amateur and professional cactus enthusiasts for understandable, authoritative information covering the entire field of cactus has led to this, the first of a series of articles written by our own Dr. Arthur D. Houghton. This work is by no means a small undertaking because of the very incomplete and more or less incorrect data available. Dr. Houghton has been urged to write these articles because of his many years of scientific study which have made him a well known botanist and horticulturist and his word may be regarded as authority and bears equal weight with the most eminent botanists throughout the country. To make these articles rich in value, everyone is urged to send photos, descriptions, or plants for identification; due credit will be given and this will materially aid Dr. Houghton in this work as he publishes a genus each month in the Journal. Genus Pereskiopsis will appear in the next issue and if you have anything of interest it should be reported immediately.*—Editor.

This genus is named after Nicolas Claude Febry de Peiresc.

The Pereskias are less known to collections than any other of the large groups, because they are mostly tender plants outside of the Tropics.

This Genus should be of intense interest because it appears to be closer to the rest of the plant world than any of the Cacti. The Pereskias have broad flat leaves without glochids (the little fine spines which look like velvet but stick in your fingers by hundreds when you handle certain Opuntias such as O. microdasys.)

The spines, except in one species, P. pereskia, are acicular (needle-shaped); they have no sheaths, nor are they barbed as in some Opuntias. The flowers have stalks and are often borne in clusters as in ordinary non-cactus plants like the rose. In fact Pereskias are the only Cacti whose flowers are borne on stalks; the Myrtillocacti are the only other ones that have flowers in clusters but these have no stalks.

Some of the Pereskias as P. autumnalis, P. guamacho, P. bahiensis, P. cubensis and others look for all the world like forest trees, in stems, branches, leaves and flowers and would not be taken for Cacti except by a botanist. P. pereskia looks like a lemon tree which has taken to climbing. So unlike a cactus is this plant that I have seen good plantsmen mistake one for a Bougainvillea.

The best theory regarding these plants is that, a geological age ago the American continent became much dryer—I mean that the rain-fall decreased—and only those variants which could stand semi-desert conditions survived. In some sections the process of increasing aridity went on generation after generation until only those plants survived which by the thickening of their epidermis, increase of their water storing capacity, lessening of the branching habit, and the production of spines and glochids, were able to withstand the assaults of the water-starved air, soil and animal life.

The Pereskias by reason of clinging to the moister zones have suffered less change than dry desert forms such as the Ferocacti and Carnegia (The Arizona Giant). The study of this genus should therefore enable us some day to know definitely to what other order these plants are related.

The Cactaceae have been put next to Begonias, Datiscas, Geissolomas and other families, but with no certainty of any relationship. Karl Schumann thinks that the Cacti, the Portulaccas (represented in most collections by Anacampseros filamentosa and Portulacca portulacaria) and the Aizoaceae (family to which the Mesembryanthemums belong) arose from a common ancestor probably extinct.

The three genera Pereskia, Pereskiopsis and Tacinga, closely related and showing a gradual evolution towards the Nopaleas and Opuntias all seem to have had an origin in the South American continent with perhaps an ancestor from Antarctica. This statement may seem irrelevant until at a later date when I expect to present and review the evidence of relationship of Cactus distribution to Van Wagenen's theory of continent formation.

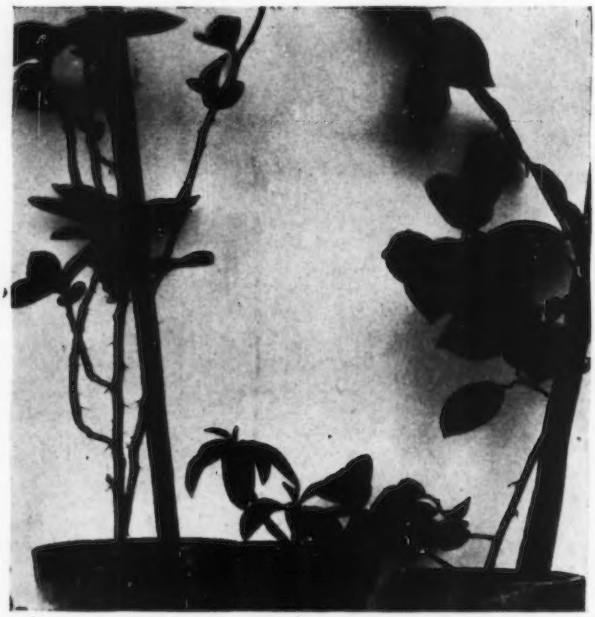
Thus it is readily seen why the genus Pereskia is such a tempting study for the histologist (the man with the microscope) and the geneticist (the student of hereditary relationships) to whom we must look to furnish us with clues.

P. pereskia, the first species to be considered, may be told from all the rest by its possession of

a short pair of stout, downward curved spines at each joint while the stem itself has needle shaped spines. It has a showy white flower about one and a half inches across with numerous stamens and yellow anthers. It has leaves on its ovary and a few tubercles; these leaves fall off when the fruit ripens. The fruit is yellow and is called Blad Apple and Barbadoes Gooseberry. P. pereskia is from tropical America and the West Indies. In the West Indies it is called Lemon Vine and West Indian Gooseberry. In other places including Florida and Mexico, it has become wild as an escape from gardens. It flowers and fruits in my garden at San Fernando, Calif.

Its chief interest to horticulturists lies in the fact that it makes the best stock on which to graft the more delicate Zygocacti (crab or lobster, Christmas or Easter Cactus) and Schlumbergeras. It is also a good stock for many species of Rhipsalis, Hatiora and even small Echinopsis, and other globular forms.

The most magnificent specimen of Chamaecereus silvestrii which I have ever seen was grafted on a stout stalk of P. pereskia. Normally C. silvestrii has branches only 2 to 4 inches long and half an inch thick. This grafted specimen had branches three-quarters of an inch thick and over one foot long, and there were hundreds of branches supported on a ring tripod. I have never had the opportunity of using any of the arborescent (tree-like) forms as a grafting stock. It would be interesting to try P. cubensis which has the power and push of a forest tree as a grafting stock. It might give some marvelous results. P. pereskia is known to nurserymen as P. aculeata though this name has been generally discarded by American botanists.



*(Left) P. rubescens N. sp. (Right) P. pereskia. (Center) P. godseffiana N. Sp.*

P. godseffiana described as a sport of P. pereskia in the Gardeners Chronicle is certainly not a sport of that plant. It does not have the typical curved spines of P. pereskia, all its spines being acicular, the leaves less succulent, apricot yellow above and purplish crimson beneath. Habit dwarf and not even erect. The joints are only a few inches in length while those of P. pereskia are often thirty feet long (as it clambers over my lath house). In the greenhouse P. godseffiana makes a handsome basket plant. It is in my opinion a distinct species of epiphytic habit, the habitat (native place) of which has not yet been discovered.

P. aculeata rubescens is referred to by Britton and Rose as another mere variety of P. pereskia. It has leaves, glaucous green above, tinged with

red beneath. Its spines are finely acicular and even in old speciments not over half an inch in length. It grows about three feet high semi-scandent, with thin succulent (not woody) stems.

If I were writing a formal treatise on this genus my key would begin about as follows:

Plants, climbing or drooping

Leaves, green on upper surface

Leaves, green on lower surface . . . . . P. pereskia

Leaves, chocolate purple on lower surface . . . . . P. rubescens N. Sp.

Leaves, apricot yellow on upper surface . . . . . P. godseffiana N. Sp.

Plants, arborscent . . . . . P. etc., etc.

P.autumnalis makes a tree up to thirty-five feet high in its native Guatemala. It has very long, slender spines, the leaves are nearly round, mucronate (with a little sharp tip); flowers orange-colored, the petals somewhat dentate (toothed).

P. lychnidiflora is only known from a drawing; it is a Mexican species, with oblong leaves three inches wide, mucronate; the spines are stout; flowers are large, two inches across; the petals are laciniate like a Sweet William (lychnis).

P. nicoyana, a tree from Costa Rica about twenty-five feet high, has flowers with fimbriate petals (fringed at the margins); the ovary is pyriform (pear shaped).

All other Pereskias that follow have petals not fimbriate.

P. zehntneri from Bahia, Brazil, is a most unusual looking plant or small tree with bright red flowers which come in November. Its habit and flowers caused Britton and Rose to suspect that it belonged to another genus than Pereskia. Its branches and leaves are easily detached as in many Opuntias. The fleshy branches occur in whorls, reminding one of Araucaria imbricate (the monkey puzzler tree).

In none of the plants whose description follows are the branches and leaves easily detached.

P. sacharosa, a tree from Cobos, Argentina, has smooth, green branches with lanceolate leaves; its flowers, three inches in diameter, occur at the end of the branches; they are very showy rose-colored or white, with eight petals and eight sepals; the axils of the sepals bear long hairs and bristles. Several large specimens occur in Southern California gardens, each one misnamed. It should make good grafting stock.

P. moorei also has long hairs and bristles in the axils of its sepals. It is a branchy shrub growing less than six feet high with orbicular (nearly round) leaves, flowers purplish-red nearly two inches long.

The remainder of the Pereskias, P. weberiana, P. guamacho, P. colombiana, P. tampicana, P. bleo, P. bahiensis, P. grandifolia, P. zinniaeflora, P. horrida, P. cubensis, P. portulacifolia, have no long hairs or bristles in the axils of their sepals, with the possible exception of P. conzatti, whose flower is unknown.

P. weberiana, have white flowers, while P. guamacho and P. colombiana have yellow petals. The lanceolate leaves of P. guamacho distinguish it from P. colombiana, which has orbicular leaves.

P. tampicana, P. bleo, P. bahiensis, P. grandifolia, P. zinniaeflora, P. horrida, P. cubensis, and

*P. morrei Br. & R.*
*Photo of plant in Fred Wolter's garden*

P. portulacifolia, have red or purple flowers. P. tampicana differs from those that follow by having very few or no spines.

The last group from P. bleo to P. portulacifolia are very spiny, at least on old branches. P. bleo, P. bahiensis, P. grandifolia, and P. zinniaeflora bear flowers only on the ends of their branches.

The flowers are in panicles (loose clusters) in

*Continued on Page 25*

# STONEFACES

*By* JAMES WEST, *San Rafael*

If you are looking for a comparatively unexploited territory in the field of Succulent-collecting, let me present those members of the great race of Mesembrianthemum known in European literature as mimicry-plants.

Where the Cactus arms itself against its enemies with horrid spines, these plants choose discretion as the better part of valor, and hide themselves from baboons and Hottentots which would prey upon them, by approximating as closely as possible their environment of rock-fragments or pebbles in shape and color.

How successfully they are able to do this, is demonstrated by the history of the discovery of one of the first species of this group by the African explorer Burchell about a century ago: stopping to pick up what he took for a curiously marked pebble, he found it rooted to the ground, and thus became the discoverer of what is now Lithops turbiniformis.

Lithops means Stoneface and is one of the many new genera (now approximating 100, and no end in sight) which N. E. Brown of Kew, the dean of authorities on the subject, has set up in his revision of the great genus Mesembrianthemum, being rivalled in segregatory activity only by Drs. Dinter and Schwantes of Germany.

Among others of the new genera, whose members may be classed as mimicry-species are Argyroderma, Conophytum, Didymaeotus, Dinteranthus, Fenestraria, Frithia, Gibbaeum, Muiria, Ophthalmophyllum, Oophytum, Pleiospilos, Rimaria, Schwantesia and Titanopsis.

The accompanying illustration of seedlings of Lithops Vallis-Mariae (named after the place of discovery, Marienthal Farm in South West Africa) shows two stages in the development of a juvenile plant. In one, the older leaf-pair, with its duller, roughened surface and the wrinkles characteristic of mature leaves, is just being split open by the emerging pair of young leaves, which look shining and glassy in comparison. Here it must be noted that the slit or orifice at the top of the plant is only found thus in juvenile specimens; in mature ones the slit extends right across the top and partly down the side, this being one of the distinguishing characters between Lithops and Conophytum. Plants of the latter genus are never split entirely across the top, but show only a small orifice in the centre (much as in the young Lithops here pictured), which only opens to admit of the emergence of a new leaf-pair or a flower-bud. Lithops is also separated from Conophytum by its herbaceous, not membranous sepals and the absence of a calyx-tube. In Lithops the flowers are either white or yellow, in Conophytum usually reddish-purple.

Until very recently only a few species of Lithops were known, such as L. turbiniformis, already mentioned (formerly under the names of M. Hookerii or M. truncatellum), L. pseudotruncatella and L. Lesliei, Brown's type-species for the genus. But in late years Prof. Kurt Dinter, in his botanical explorations of South West Africa, has discovered and described many new kinds, with other discoveries to follow in all probability, so that at present 27 "good" species are known. The following list includes all species described until 1928:

*Seedlings of*
*Lithops Vallis-Mariae Dtr.*

Lithops alpina Dtr.
Lithops bella N. E. Br. (L. Lericheanum according to Brown)
Lithops Dinteri Schw.
Lithops Eberlanzii Dtr et Schw.
Lithops Francisci Dtr et Schw.

Lithops Fulleri N. E. Br.
Lithops fulviceps N. E. Br.
Lithops gracilidelineata Dtr.
Lithops Julii Dtr. et Schw.
Lithops karasmontana N. E. Br. (syn. M. damaranum N. E. Br.)
Lithops kunjasensis Dtr.
Lithops lateritia Dtr.
Lithops Lericheana D & S (maintained as separate fr. L. bella by Dinter)
Lithops Lesliei N. E. Br. (M. ferrugineum Schw.)
Lithops marmorata N. E. Br.
Lithops mickbergensis Dtr.
Lithops Mundtii Tisch. (L. pseudotruncatella v. Mundtii Dtr.)
Lithops opalina Dtr.
Lithops optica (Marl.) N. E. Br.
Lithops optica var. rubra Tisch (L. rubra N. E. Br.)
Lithops pseudotruncatella (Bgr.) N. E. Br.
Lithops pseudotruncatella var. alta Tisch., and about five others listed in catalogues.
Lithops rugosa Dtr.
Lithops Ruschiorum Dtr. (L. Ruschiana N. E. Br.)
Lithops summitata Dtr.
Lithops terricolor N. E. Br. (M. locale N. E. Br.)
Lithops turbiniformis N. E. Br. (M. turbiniforme Haw., M. truncatellum Hook, fil., M. Hookeri Bgr.)
Lithops urikosensis Dtr.
Lithops Vallis-Mariae Dtr. et Schw.

L. Friedrichiae N. E. Br. is now placed in a monotypic genus Ophthalmophyllum. Another closely related genus is Dinteranthus, including D. Margaretae, D. microspermus and D. Pole-Evansii.

The centre of distribution for the genus is central and southern S. W. A. (Damaraland, Great and Little Namaqualand, Namib), thence southeasterly into Transvaal and Cape Province (Prieska Div., Griqualand West, Karroo from Langsburgh to Willowmore Divisions.

In nature, the "bodies" or leaf-pairs are partly buried in the ground, leaving only the top of the plant showing. This top, varying with the species, may be either flat or gently concave, smooth or wrinkled, and generally marbled with translucent areas, differing in color from the rest of the surface. Lithopses are thus, like some of the Haworthias (e. g. H. cymbiformis) "window-plants." It must be remembered that what appears as the top of the plant is morphologically part of the under-side of the two leaves, the true upper sides, closely appressed, forming the hidden interior of the slit. As in all leaves (except those of aquatics) the stomata or breathing pores are on the (true) under side, consequently in this case the apparent upper, and so exposed to full light. But the chlorophyll-bearing cells (whose function is the manufacture of starch from the Carbon Dioxide of the air) are in our plants mainly distributed in a layer under the epidermis of the normally underground base of the plant, the rest of the body consisting mainly of watery tissue; thus they receive the light of the firece African sun effectually diffused and moderated by passing through the turbid medium of the (often reddish or brownish) "windows" and the watery cells of the interior.

So much for botanical interest. To the discriminating collector there is a subtle charm in the fine differences of delicate tints, gray, green, brown or red, in the various species, in the variety of the marbling in the window-areas, contrasting prettily with the wrinkled or polished or eggshell-like texture of the opaque parts of the top, changing both with the age and stage of growth of the plant; when resting, the surface becomes more and more opaque and duller in color, forming a protective skin over the developing young growth beneath, which at the proper season swells forth in shining newness, finally pushing aside the old leaves. The illustration of the second plant of L.Vallis-aMriae seen from the side shows this process almost completed. The photographs were taken in July of this year, of plants just one year old from seed, having thus made two pairs of leaves to date, not counting the cotyledons, which by the way, are in this genus connate and succulent, resembling little crystalline beads, not unlike seedlings of Echinocactus or Mammillaria. The seeds ger-

*Lithops bella N. E. Br.*

minate easily, as a rule; as is the case with so many other succulent plants, they scatter their germination period over several months, perhaps half of the seeds coming up in the normal period of from four to six weeks, while the rest are held in reserve, as it were, appearing from time to time during the following months, up to a year or more later.

Among the most attractive of the species are: the well-known L. Lesliei and L. pseudotruncatellum, the former a deep red-brown with rather flat top and glossy surface, the latter also flat, gray-green with light-brown marbling. L. bella (the beautiful), here illustrated, is quite convex on top, of a most delicate pale tan, with pronounced but cloudy marbling in rich brown. L. Ruschiorum resembles in texture and color some small bird's egg, palest blue-green, finely and irregularly dotted and pencilled with dark brown. L. fulviceps deserves its name, for its head is indeed of a fulvous hue, mottled with green. L. summitata shows windows of rich velvety burnt umber, while L. opalina is as opaline as its name implies. L. lateritia, not yet seen by the writer, is described as being of a vivid brick-red color, strongly wrinkled and without markings; it should be something worth having.

Stonefaces are not for those who love the gigantic and impressive in plant life, for they are all decidedly dwarf, few of the species exceeding an inch or two in diameter. In time, they form clumps of several bodies, but they are very slow to increase. This makes them very well adapted to collectors with little room at their disposal; a very complete collection of the genus could easily be accommodated in a small window box. By the same token, they are so small and inconspicuous as to be rather in danger of getting lost when planted out; one would have to contrive some special dwarf garden set apart for them where their small charms would not be overshadowed by their bigger brothers, and could be duly appreciated. But on the whole they are doubtless better adapted to pot-culture, even in Southern California, where they otherwise should prove hardy enough. They will stand considerable cold, if kept dry, and probably any amount of heat. In general, the culture should be about the same as for the majority of Cacti, with rather more light and less heat in winter. A top-dressing of gravel or charcoal is beneficial. In cooler climates it would not be advisable to bury them to the tops, as they grow in their natural habitat, for this might induce rotting. They are remarkably free from pests of any kind. In their home they grow in a variety of soils, each species seeming more or less limited to one particular formation, many growing in decomposed granite, others in quartzite, sandstone, limestone and other rocks. In cultivation an average well-drained mixture seems to suit all of them, so far as tried, equally well. But this writer has not grown them long enough to make any definite pronouncements, and would be glad to hear from other growers on the subject.

Seed of nearly all known species is now obtainable from several of the European specialists, and will be found to give good results, although it is quite expensive, especially for the more recently introduced species, which run as high as ten cents a seed.

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## CATALOGUES

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# EDWARD MENDEL'S GARDEN

*By* GRACE P. NICKERSON

I had not realized how interesting, beautiful and artistic a large garden of cacti and succulents could be, until I visited the Edward Mendel garden, located on Chiselhurst Drive, well up in the Hollywood Hills with a wonderful view of the city below.

The garden is designed with irregular terraces, each supported by well constructed stone or cement walls.

As I climbed the winding stone steps and walks, I found equally interesting cactus and succulents at each level. All artistically arranged as to grouping and spacing with no monotony as to size or color. Always tall plants among the low ones, a green cactus or Euphorbia in just the right place among the grey or brown cacti.

One of the most interesting sections of this garden is so placed that the white stucco wall of the home forms its background. Against this wall are carefully trained several excellent climbing specimens of Selenicereus pteranthus, Hylocereus napoleonis and Hylocereus undatus. Besides the climbers in this particular division of the garden is found the tree-like Euphorbia alciornis and E. abyssinica, the shrub-like Euphorbia grandidens, several each of Pachycereus marginatus, Cereus peruvianus monstrosus, Euphorbia ammak, E. echinus, E. heptagona, E. pseudocactus, Astrophytum ornatum, Neomammillaria geminispina, N. donatii, N. compressa, Astrophytum myriostigma, Echinocactus ingens, E. grusonii, Ferocactus glaucescens, Homalocephala texensis, Neoporteria nidus, Astrophytum capricorne and a number of Cephalocereus senilis.

Mr. Mendel seems to be giving particular attention to Cephalocereus senilis, as he has over fifty good sized plants as well as a goodly number of healthy seedlings. These plants are quite a curiosity. Their heads are covered with long shaggy white hair, in such a way as to make one think of old men with unkempt flowing hair and beards. If they would but turn about we should not be surprised to see wizened old faces. This type of cactus is applicably dubbed "Old man cactus." There are also a number of nice specimens of Cephalocereus chrysacanthus and Cephalocereus hoppenstedtii.

Many large Echinocactus grusonii are scattered about this garden. One of these plants has fifteen small heads growing from one side of it. Near these cacti are large specimens of Cereus peruvianus, C. peruvianus var. longispinus, Carnegiea gigantea and Pereskia bleo.

. A large Lemaireocereus thurberi cristate and Ferocactus wislizeni cristate, besides several smaller cristates and a variety of Agaves add greatly to the interest of this garden. Mr. Mendel has certainly produced a garden of unusual beauty and botanical value. The entire garden has been developed within four and one-half years.

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*Arts and Architecture,* one of the most important magazines in the country, has shown its great interest in cacti as used in the development of Mission and Spanish styles by giving a magnificient cup for competition in order to encourage the culture of cacti.

# THE CACTUS AND SUCCULENT SHOW

AUGUST 29, 30, 31

London, Paris, Berlin, New York—attention! Have you ever staged an all Cactus and Succulent Show? No! The first one ever attempted will be at Pasadena, August 29-30-31. The rarest of these plants in the world will be on view and many valuable prizes for those exhibiting them. The rare plant Barons will not win all the prizes. With the same unselfishness which has characterized all their work, the Officers of the Society have agreed not to compete for any of the prizes except the Mrs. Sherman Hoyt Sweepstakes Cup. So, if you have a single plant you think is rare or beautiful you may safely bring it to the show with a good chance of winning a Cup, Ribbon, or Premium.

The Pasadena Star News Cup will be given for the best staged collection, large or small, of Cacti and Succulents. The Mr. Stephen Vavra Gold Prize will be for the best and rarest plants shown. The President's Cup is given by Dr. A. D. Houghton, for the largest collection of correctly named Cacti.

Many collectors from a distance will be present and a special prize of a collection of about 50 imported succulents just released by Uncle Sam will be given by our fellow member, Mr. Belden D. Sauer of Rocknoll, Foster, Ohio. This collection will be staged by Mr. John S. Vosburg of Rust Nursery, Pasadena. By reason of the great scientific value of this collection, the President will be the sole judge in the awarding of this prize. One of the chief points in judging will be the fitness of the winner to properly take care that the collection will be well cared for and remain intact. The winner will agree to exhibit this collection at shows for three successive years or the collection will revert to the Society.

There will be many other prizes, including priceless gems of seedlings from the famous Huntington collection, due to the courtesy of our distinguished fellow-member, Mr. William Hertrich.

The list is subject to change or revision and the semifinal list of premiums (this is the best tentative available list) will appear in our next Journal, August 20.

That Journal will take the place of a Show Catalogue. Be sure and bring it with you to the Show—it will act as your check list. Be sure and exhibit. There will be no charge for space. The Reservation Committee will not name your plants. Each exhibitor must select the Class in which the exhibit is to be entered.

Reservations for space of ten or more square feet must be made to Mrs. Bonynge, 103 N. Mansfield, Los Angeles, phone WHitney 6006, not later than August 27. All exhibits must be in place for judging by 10:30, August 29.

The rules for judging will receive special study, make kicks. Your complaints of this season will help us next time. Remember this is the first show of its kind and we have no precedents. Plants must be clean and have no infestations. This is a disqualifying point. Points are allowed for good staging. Containers must be at least clean. A meeting of the judges prior to judging will be had with our president and final rules given out. All judging rules will have as their basis the increase of knowledge first, and public interest second.

*Show Committee*

Dr. Arthur D. Houghton, *Chairman*
Mrs. M. W. Dieterich, *Secretary*

PREMIUMS
*Chairman,* Mr. J. Vosberg
and assistants whom he may choose

PUBLICITY
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B. L. Sloane
Mrs. Edward W. Lawrence

RESERVATIONS
*Chairman,* Mrs. Margaret Bonynge
Dr. Willannie Breden
Mrs. Florence G. Houghton

PRIZES AND RIBBONS
*Chairman,* W. Lee Chambers
Mrs. Julian de Lecuona

FINANCE
*Chairman,* Mr. F. O. Frazier
R. E. Willis
John Dinsmore

TICKETS
Scott E. Haselton

GARDEN SECTION CONTACTS
Mrs. Chas. E. Sullivan for local and south of L. A.
Mrs. Ann G. Powers for north of L. A.

JUNIOR EHIBITS
Mr. R. S. Williams

## PREMIUM LIST

A1 SWEEPSTAKES. *To be awarded on the last day of the show. Points for most interest to fanciers.*
The Mrs. Sherman Hoyt Cup.

A2 BEST STAGED COLLECTION. *Large or small.*
1st. The Pasadena Star News Cup.
2nd. Blue ribbon.

A3 BEST AND RAREST PLANT SHOWN.
Stephen Vavra Gold Prize, $15.

A4 LARGEST COLLECTION OF CORRECTLY NAMED CACTI.
President's Cup.

A5 LARGEST COLLECTION OF NAMED SUCCULENTS.
3 prizes.

A6 LARGEST COLLECTION OF EUPHORBIA.
3 prizes.

A7 BEST MINIATURE CACTUS AND SUCCULENT LANDSCAPE. *Amateur. Must be over two feet and under six.*

A8 BEST MINIATURE CACTUS AND SUCCULENT LANDSCAPE. *Professional. Must be over two feet and under six.*

A9 BEST CACTUS BOWL. *Amateur.*

A10 BEST CACTUS BOWL. *Professional.*

A11 BEST CACTUS BOWL. *Junior (under 18).*

A12 BEST COLLECTION OF OPUNTIAS.

A13 BEST COLLECTION OF CRISTATES.

A14 BEST COLLECTION OF GRATED PLANTS.

A15 BEST COLLECTION AND DEMONSTRATION OF SEEDLING GROWING.

A15 LARGEST COLLECTION OF NAMED EPIPHYLLUMS.

A16 BEST COLLECTION OF ZYGOCACTUS AND SCHLUMBERGERA.

A17 BEST COLLECTION OM MAMMILLARIA, NEOMAMMILLARIA AND CORYPHANTHAS.

A18 BEST COLLECTION OF ECHINOCACTOIDS.

A19 FINEST SPECIMEN ASTROPHYTUM.

A20-100 BEST COLLECTION OF ANY OTHER GENUS OF CACTI.

B1-50 BEST SPECIMEN OF ANY OTHER GENUS OF SUCCULENTS.

C BEST COLLECTION OF FREAKS.

C2 BEST COMEDY LAYOUT. *Must show horticultural skill.*

D1 BEST WOMAN'S CLUB EXHIBIT.

D2 BEST JUNIOR. *(Under 18).*

E BEST EXHIBIT OF CACTUS GROWING AND HANDLING AIDS, SPECIAL TOOLS, ETC.

F BEST COLLECTION OF PLANT WITH REGARDS TO FANCY POTS OR CONTAINERS.

G COLLECTION OF INSECT PESTS AND PARASITES, INIMICAL MOULDS AND FUNGI.

H BEST DISPLAY OF METHODS OF PROPAGATION OF CACTI AND SUCCULENTS.

# YOUR SECRETARY'S PAGE

*By* R. E. WILLIS

THE NEW YORK BOTANICAL GARDEN
BRONX PARK
NEW YORK

July 15, 1929.

Mr. R. E. Willis,
Los Angeles, California.

Dear Mr. Willis:

I take pleasure in transmitting herewith my check for $100 for life membership in The Cactus and Succulent Association and ask if you will please transmit it to the Treasurer.

And please convey my regards to Dr. Houghton when you see him and express to him my appreciation of association with him and other members of the organization.

yours faithfully.
N. L. BRITTON.

We are proud to publish this letter and to express to Dr. Britton the appreciation of the entire Society.

Since the last issue of the Journal we have added a number of members to our Society. Keep up the good work. Send in subscriptions and membership dues now before you forget it. Dues $1.00 per calendar year for ordinary members. $5.00 a year for patron members, $100.00 for life members.

The June meeting was held in the lecture room of the Los Angeles Public Library and was attended by about 175 members. Routine business was quickly dispatched.

The July meeting will be held at the residence of Mr. Charles H. Hamilton in Flintridge, Pasadent, which is too late to be reported in this issue of the *Journal*.

At the last regular meeting of the Board of Directors the following permanent appointments on the Editorial Staff of the Journal were made to replace previous temporary appointments:

Managing Editor, Mr. Scott Haselton
Room 414, 1240 S. Main St., Los Angeles
Business Manager, Mr. G. A. Frick
1800 Marengo St., Los Angeles
Associate Editors, Mr. James West
745-5th Ave., San Rafael, Cal.
Mrs. E. A. Harris
158 Groveland Place, San Antonio, Texas
Dr. Arthur D. Houghton
San Fernando, Calif.

Dr. and Mrs. Henry Koenig and their two daughters, of San Francisco, were visitors last month in Southern California. They called on most of the larger collectors in the Southern District. The Doctor is an enthusiastic member of the Society, his specialty being Mesembryanthemums. He was present at the June meeting and brought us greeting from the Northern District and welcomed the *Journel*. We are looking forward to an interesting and instructive article on Mesembryanthemums from the Doctor in the near future.

If we had about a dozen members as energetic as Mr. James West, our Vice-President in the Northern District, our membership list would look like a Los Angeles phone directory.

Mrs. Ann G. Powers of Oxnard, our Vice-President in the Western District, is doing some very good work for the Society and the Cactus Show.

Miss Zahrah Pearson has moved her household goods and her cactus collection. She thinks that moving furniture is one thing but moving a cactus collection is a lot of other things.

Mr. McCabe, of the McCabe Cactus Garden, San Diego, intends to follow the very specific directions given in Mr. Barrett's article on Lophocereus schottii in the July issue of the *Journal* and bring back a load of that beautiful plant for distribution among his many friends and customers. We hope he doesn't lose his way. Perhaps he will take the precaution of taking with him a copy of the July *Journal* for reference!

Mrs. J. C. Beatty ,15951 Ventura Blvd., has invited the Society to meet at her residence in the near future.

The members of the Society were very much disappointed in not hearing Dr. Eric Walther at our last meeting. He was unable to arrive in time for the meeting.

Mr. B. C. Saur of Foster, Ohio, one of our enthusiastic members, has offered a wonderful collection of some 50 Sempervivums and Sedums as a prize for the August Cactus Show. It is hardly necessary to say that his offer was accepted.

Send in any news items of interest to *Journal* readers.

## EDITORIAL PAGE

The only editorial possible is one of enthusiasm. The appreciative response to the first issue of this publication has been overwhelming. The hundred and more letters, telegrams, and verbal communications are most encouraging and have come from all walks of life. So long as the growing of cacti is enjoyed by so many people and has such curative properties for mind and body then it is not a passing fad but will be taken up by the many others who need diversion or the strange healing powers that the strange but fascinating plants possess. As Colonel Kewen says "When one communes with his cactus, one forgets all difficulties and a serenity of mind results which is possible with but few other recreations or hobbies." Nor is the growing of cactus a purely selfish pastime, since our collections are of value to science and our experiences can be recorded within this publication.

If the support continues we are bound to make this *Journal* far better than we had ever hoped. The response to the questionnaires has been very helpful and we want to hear from each individual subscriber so that we can give you what you want. At present we are trying to use a style and subject matter which is popular with the majority and as we gain experience, then we too, can be scientific and the previous issues of this magazine will be of value to those who are about to travel over the same road.

We shall get from this magazine just what we put into it. There are no short cuts. By actively taking part you will be surprised how much more pleasure you will gain. Write us a letter, send in some contribution for publication, write your experiences, send photos and "cuts," make some suggestions. Take a part in your magazine.

★ ★ ★

Since this magazine is self-supporting we may be somewhat limited as to the number of "cuts" which we can buy for any one issue. Illustrations add so much to a publication that we hope some big hearted cactus philanthropist will start a fund for that purpose. Fifteen to twenty dollars an issue would make it possible to illustrate most of the articles. Perhaps those who would like to see a view of their garden or a picture of a plant printed in the Journal, will be glad to pay the price of an illustration. An average sized "cut" costs about four dollars.

The Entertainment Committee reports that there will be no regular monthly meeting during the month of August, owing to the Cactus and Succulent Show being staged at Pasadena this month.

★ ★ ★

Dr. Thomas Harper Goodspeed of the University of California, an old friend and associate of our President, Dr. Houghton, is today the focus of all eyes in plant and biological work for his discoveries of the use of the X-ray in plant breeding. His work is the greatest since Charles Darwin and Mendel in speeding up improvement in plants and, in fact, in making new species. During his recent visit to our President at his San Fernando gardens, Dr. Goodspeed promised to tell us something of the nuclear structure of the cacti in a future issue and cooperate with the Society. He said many nice things about our Journal.

★ ★ ★

*Telegram from Cactus Expert West:*
Three cheers for our Cactus Journal—it's fine—I'm proud to be connected with it.

James West,
San Rafael, Calif.

★ ★ ★

Some members of the Society have not yet subscribed for the Journal. Do this at once, as we want to get our quota for the special postage rate required by the government.

★ ★ ★

*U. C. Man Heads Botanic Garden*

NEW YORK, July 8 (Exclusive) E. D. Merrill, dean of the college of agriculture, University of California, and a botanist of international repute, today was appointed director of the New York Botanical Garden to succeed Dr. N. L. Britton, who resigned the 6th inst.

Dr. Britton was made director emeritus.

★ ★ ★

Many fine articles are being held over for future issues. We regret that we cannot run them all in this issue, but we are no less appreciative of your loyal efforts and each contribution will either be published or returned with constructive suggestions.

★ ★ ★

The notices in the exchange column will hereafter be limited to four lines, including name and address. Send in your exchanges and report results.

# OPUNTIA ERINACEA

*By* R. E. WILLIS

Opuntia erinacea was discovered by Englemann and a description was published in Proceedings of the American Academy 3:301, 1856. The same plant was again discovered by Weber and a description was published in Dict. Hart. Bois 896 in 1898. Weber called his plant Opuntia ursina; the older name being always correct we should call this plant Opuntia erinacea. The common name is Grizzly Bear or The old man of the plains. In its humble way this plant imitates the king of cacti the Cephalocereus senilis (Old Man Cactus) or (Old Man of the Mountains).

Opuntia erinacea grows in small clumps not over eighteen inches high, branching from near the ground as a rule, but sometimes from the side or top of the older joints. It is quite erect in habit. The joints are oval shaped and about eight inches long, rather flat in new growth more approaching cylindric in the old joints. The areoles are somewhat tuberculate, large, numerous, and closely set, about one-fourth inch apart; earch areole has many spines nearly always white, sometimes brownish or smoke colored or white with brown tips. Spines slender flaccid; on new growth the spines are about an inch long; on older growth about three to eight inches long.

Glochids (the tiny fuz like spines found in all Opuntias) are very numerous. The flowers are about two inches across and the same in length; sometimes creamy-white and sometimes reddish-pink. The color change is evidently caused by the difference in soil, climate, etc., since, in all other details the flower and seeds are always the same. The ovary and fruit are very spiny, being about two inches long, oval and plump, shaped like a small egg. The seeds are large.

This plant is distributed over northwestern Arizona, southern Utah, southern Nevada, and eastern California. The writer has seen this plant growing in the flats between mountain ranges in the Morongo Valley and on the lower slopes of Ord Mountain near Dagget, California, and in western Arizona.

As you approach a sloping mesa covered with this plant you get an impression of the last days of the winter's snows in the north where only patches here and there are left.

This plant grows easily from seed and the tiny plants, when one and one-half to two inches high, are very attractive.

O. erinacea grows easily when transplanted or from cuttings. As soon as it is established in its new home which takes about one week, you may give it a little water about once a week. When new growth shows in the spring, water plentifully as often as the ground gets dry. It in pots water about twice a week or once a week if in the open. If your soil is porous and has good drainage water will make it a beautiful and fast growth, but will not bloom as well. Less water makes more flowers.

*O. erinacea*

# WATERING CACTI

*By* MRS. ANNA VOSS, *Cleveland, Ohio*

In the last issue of the Journal it was stated that the amount of water and method of watering depended upon the season. During the growing months, from the latter part of April to the middle of August, the roots will stand considerable moisture without being kept saturated, and overhead spraying produces growth. Towards the end of July syringing should cease and watering should be gradually reduced, and although the plants assume a shrivelled appearance and a reddish color there is no cause for alarm since these are good signs of ripeness with a promising crop of flowers when the rains start after the dormant period. No rules can be given that will cover the watering of all plants but this method seems suitable for plants which require moist tropical conditions such as the Opuntia, Cereus, Echinopsis, Euphorbias, Echinocactus, Mammillaria and Melocactus. The genera Zygocactus, Rhipsalis and Epiphyllum will not stand the long period of drought and the roots should always be kept more or less moist.

The next point to consider is the position of cacti, by which is meant where the plant is grown; whether in a room, a greenhouse or frame. The dryer the surrounding air, the more absorbtion, and consequently more watering is necessary to sustain plant-life. When grown in ordinary warm, dry living rooms, they naturally require more watering than if grown in a greenhouse where there is a great deal of moisture. It is safe to say, that if set out in a frame, the majority of cacti would thrive nicely during the winter months without water, while in the summer they would not require as much as when grown where the soil has a greater chance of drying out. In planting out in frames, one very important point to be observed before plunging the pots is the drainage. Put a layer of broken bricks or stones or broken pots, three or four inches deep, so that superfluous water will not stand at the roots. The reader must remember I am writing of conditions in an Ohio winter, and there would be no need for this perhaps in the far southwest where these plants are native.

Next in importance is air. For success in growing all plants, air is as essential as water. During the summer, the growing season, it is advisable to plant cacti out in the open ground where the pot is plunged in order to retain moisture at the roots during a dry spell.

During the dormant season of cacti, which varies somewhat in the many species, covering a period of from November to the latter part of February or early March, they require comparatively little water. Epiphyllums, which flower during these months, should be watered in order that the buds will develop. The bulky varieties contain enough moisture to sustain themselves easily during their resting period. The condition of the plant must always be considered in watering. Do not water newly set plants until they have had a chance to make good strong roots. A bulky slow growing plant does not require as much water as a quick-growing species, a soft-wooded and delicate variety does not require as much as a well seasoned, hard wooded plant; in fact, every species and even individual plants respond to different requirements which observation alone can determine.

## THE GENUS PERESKIA

*(Continued from page 25)*

P. bleo, P. bahiensis, and P. grandifolia. The naked (having no leaves on it) truncate (blunt as if cut off) fruit differentiates P. bleo from the leaf-bearing, not truncate fruit of P. bahiensis and P. grandifolia.

P. zinniaeflora has solitary, terminal flowers. P. horrida, P. cubensis, and P. portulacifolia bear their flowers in the axils of the leaves. P. horrida and P. cubensis have leaves about one-third of an inch long, which are either blunt or pointed.

P. horrida bears two to five flowers together, while those of P. cubensis are solitary.

The leaves of P. portulacifolia are emarginate (having a small notch at the end).

P. conzatti is a forty-foot tree from Tehuantepec, Mexico, with smooth, brown branches and orbicular leaves. The areoles are small with short, white wool, a few long hairs and acicular spines about an inch long; the flowers are unknown. Ovary with small scales, naked, pear shaped fruit an inch and a half long. It is not well known.

All the Pereskias of which I have any knowledge root readily as cuttings inserted in sand during warm weather. I have frequently used them as grafting material when freshly cut, rooting them afterwards. I have only six species in my present collection, and would be pleased to receive others in exchange. Pereskias grow readily from seeds which should be planted as soon as ripe. They thrive best in a good, rich soil such as roses like, but will not tolerate the slightest lack of drainage.

# SUBSTITUTING

*By* G. A. FRICK

The practice of substituting in mail order shipments should be discountenanced by all purchasers of cactus, and discontinued by all dealers of such plants, because it creates confusion in the correct names of the plants and causes dissatisfaction in not receiving what was ordered. Substituting might be permissible with a person who is just starting a collection, and wants his plants at once. The dealer who is out of some of the plants ordered and substitutes others should inform his customers why he has sent the other plants.

Then, there are cases in which the dealer has no right to substitute without first informing his customer why he cannot furnish all the plants ordered. A person desirous of adding a few new varieties to his collection places an order with a dealer, expecting to receive such plants as shown on the price list. When the plants arrive, he finds that some are already possessed by him and naturally is dissatisfied. Then comes the explanation from the dealer, whereas if the explanation had come before the plants were sent, the party ordering, could have selected others; thus there would have been a satisfied customer and the dealer could look to this customer for future order. While on the other hand, this customer is lost to this particular dealer for all time, and the dealer is not recommended to others.

And last but not least, yet the worst, is the dealer who, when receiving an order, if he has not got the plant ordered, will send a plant similar in appearance; putting the name of the plant ordered on the substituted plant. If the purchaser is not familiar with the plant ordered, it is probable he will remain in ignorance of just what that dealer did to him for a long time and perhaps never know unless some one familiar with the plants visits his collection and corrects the mistake.

These are stubborn facts, not a tale to take up valuable space in the Journal. I have experienced some of these annoyances, and have come in contact with others who have had the same experience. But thanks to the Journal, through its advertisers, amateurs are brought in contact with many reliable dealers in cactus and succulent plants who can be depended upon and supplying his wants without the annoyance of substituting.

## NORTHERN CALIFORNIA NOTES

The weather in the San Francisco Bay Region was unusually and persistently hot during June and early July. It was enjoyed and absorbed by our Succulents and Cacti.

Charles Abraham, one of our oldest and most valued members, has been on the sick-list. We all wish him, who has been known and loved for half a century by everybody interested in rare plants, a speedy recovery. It does not seem natural to come to 1600 Greenwich, and not find him up and about among his plants.

H. L. Bettencourt of San Leandro, our prize grafter (no punning) made a tour of Southern collections.

James West gave a talk on Cacti and Succulents before the San Francisco Women's Club.

★ ★ ★

For advertising rates apply to G. A. Frick, 1800 Marengo Street, Los Angeles, California. It will certainly pay you to run a trial ad.

*The Editor reserves the right to accept or refuse advertising*

# THE PACIFIC BEACH SHOW

*By* R. E. WILLIS

The Flower Show held at Pacific Beach, near San Diego, California, during the week of the Fourth of July was attended by four or five thousand people. The flowers and plants exhibited were most beautiful. The display of Glads and Dahlias was especially lovely.

The trend of the times was shown by the fact that the largest crowd was always to be seen around the Cactus and Succulent displays. A table eight feet by twenty feet was filled with the most exquisite and rare plants from the collections of Miss K. O. Sessions of Pacific Beach, Mr. W. I. Beecroft of Escondido and Mr. James Stromquist of San Diego.

Miss Sessions' display consisted of 10 Aloes, 6 Mesembryanthemum, 4 Echeverias, a gorgeous Euphorbia splendens with hundreds of beautiful red blossoms, an Echeveria metallica flammea in full bloom in a jar decorated to match the color of the foliage of the plant. This was considered by many as the most artistic exhibit in the entire show.

Mr. Beecroft's display consisted of the following, every plant either very rare or a very fine specimen: 3 Gasterias, 6 Haworthias, 1 Kalanchoe, 5 Mesembryanthemums, 1 Aloe, 4 Senecio, 2 Stapelias, 1 Pelcyphora, 4 Agaves, 2 Euphorbias, 1 Sanseviera cylindrica, 1 Echidnopsis, 1 Echeveria, 3 Opuntias, 1 Cereus, 1 Wilcoxia, 1 Rhipsalis, 2 Cephalocereus, 8 Mammillarias and Neomammillarias.

Mr. Stromquist displayed 3 Agaves, 12 Echeverias, 2 Crassulas, 1 Dasylirion, 2 Euphorbias, 8 Sedums, 2 Sempervivums, 3 Stylophyllums, 1 Tradescantia, 1 Rochea, 1 Umbilicus, I Acanthocereus, 1 Chamaecereus, 2 Echinocereus, 1 Opuntia, and 1 Rhipsalis, all rare and beautiful plants.

The McCabe Cactus Gardens of San Diego, had a display of Cactus and Succulents, mostly from the deserts of California and the border states, also South American Cereus. Their display was made to look very realistic with the aid of rocks and sand. A unique feature was the waxed nocturnal blossoms from the Cereus which had been removed from the plant at midnight and replaced on the plant after waxing; they looked very real throughout the show.

All the cacti and succulents in the show were well labeled and made a most interesting collection.

Each of the above exhibitors received an award of merit as the various collections were not entered for competition.

In Mr. Beecroft's display was a beautiful and perfect specimen of the newly discovered and recently named plant, Mammillaria hahniana, being an import from Mexico and exhibited in the United States for the first time, and was awarded a first prize ribbon and a silver cup.

The public was very much interested in this collection of rare and exquisite cacti and succulents.

Miss K. O. Sessions was the sponsor and deserves much credit for her untiring work in putting over a successful show.

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Mammillaria hahniana is by far the most beautiful of any of the Mammillarias. The plant on exhibition at the Pacific Beach Flower Show in a glass case was nearly three inches across and three inches high, globular with pure white hair one and one-half to two inches long spreading out on the ground. It is a true Mammillaria but looks very much like a miniature Cephalocereus senilis (old man cactus).

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*The following news item of interest to lovers of Cactus and Succulents, appeared in the Los Angeles Times of recent date.*

"A gentleman in Santa Monica read a magazine that had been sent to him from Africa and then came to San Fernando to look at the collection of succulents owned by Dr. Arthur D. Houghton. It appears that not long ago Dr. Houghton and his cactus garden were the subject of an article in a local newspaper. In some way the article was reprinted in a South African magazine, which in turn found it way to Santa Monica. After reading the articles the Santa Monica gentleman who has a hobby for cacti, called upon Dr. Houghton and spent part of the day looking over the Doctor's plants. Dr. Houghton is the President of the Cactus and Succulent Society of America and an eminent horticultrist whose name and articles are frequently seen in print."

# BEST SOIL FOR CACTUS

*By* ERNEST BRAUNTON

Several years experience in growing cacti on a large scale, leads me to recommend the following as the best soil, where it is desired to make one mixture do for all cacti: one-half sharp sand, one-fourth good peat, one-fourth good black loam; to this should be added about one-twentieth as much pulverized charcoal. This soil will do for the finest and most tender plants, but for coarse cacti such as Homalocephala texensis, Ferocactus acanthodes, F. viridescens, F. wislizeni and all such heavy bodies it is safe to use a much less proportion of sand, as well as for all Opuntias, Zygocactus, Epiphyllums and climbing Cereoids.*

Those who keep their plants in pots all the time should plunge them in the ground during the hot weather; dig a hole the size of pot or four or six inches deeper than the pot, fill this up with stones, cinders, or broken brick until the pot will just be level with the top of ground, then pack the earth tightly around the pot. This should be done in the early Spring and left until cool weather in the Fall. If plants are in small pots and exposed to the blazing sun, the roots burn and no matter what soil they are in, it is nearly impossible for them to make any growth.

More plants suffer during the hottest weather for want of water than from not being in the proper soil. Many people think that because cacti usually grow on the desert that they require no water. Within a few rods of where I am now sitting there is an Opuntia engelmanii which grows in running water all the year, and seems to do very well. Of course very few cacti could stand such treatment, yet I think better success would be attained by the majority of amateurs if more water were used during the hot weather.

*There is no word for the group meat here. This group belongs to sevedal such as Selenicereus, Hylocereus, Aporocactus, etc.—A. D. H.

## Charcoal for Rooting Cuttings

*By* G. A. FRICK

The following method has proven itself very successful in the rooting of cactus cuttings:

Fill a flat box about eight inches in depth with two inches of coarse coal or wood ashes, cover the same with about four inches of crushed charcoal and moisten the whole thoroughly, after which put in the slips or cuttings you wish to root. Set the globular varieties on the surface of the charcoal and sink the taller ones into it; securely fasten to a stake to prevent them from falling when watering. Now set the box in a light, shady position in your greenhouse or in a partially shaded spot out doors if it is mid summer, but protect them with glass it it rains. Do not exclude light, and in a reasonably short time new roots will make their appearance. Keep the charcoal moderately moist and it is very beneficial to occasionally spray the plants with an atomizer or small syringe.

Do not be hasty in planting your cuttings out as soon as young roots show themselves; always allow them to make a bunch of good healthy roots and your patience will be rewarded by better growth, after becoming thoroughly established. This error in hasty planting before being thoroughly rooted is often the cause of the plant showing no growth for a long period of time, because there was not enough time allowed for roots to form which would properly nourish the plant.

When planting out, take the plant out of the cutting box carefully so as not to injure the tender roots and pack the soil prepared for them carefully around and water slightly.

This method will prove very satisfactory with Euphorbias, Aloes, Agaves, etc., and also many leaf plants. It is certainly worthy of a trial, as it costs comparatively nothing, and better results will follow than from the use of just plain washed sand. In the use of washed sand, cuttings must be allowed to dry off before setting them in the cutting box, which of course causes them to shrivel to a certain extent. With the use of charcoal it can be placed at once, as the charcoal contains healing properties and no danger is experienced from the rotting of healthy cuttings. Charcoal holds moisture as long as sand, yet does not bake nor become impure.

## PURCHASE AND EXCHANGE COLUMN

*Conducted by* E. P. BRADBURY,
Fontana, California

*This column is for purchases and exchanges only. For the sale of plants consult the advertisements.*

Due to the fact that I no longer have any greenhouse space available I am obliged to give up that part of my succulent collection that is not hardy here or that will not winter in protected cold frames. Will therefore exchange cuttings or plants of Sedastrum hemsleanum, S. ebracteatum, Nothonia pendula, Echeveria whitei, maxoni, microphylla, funki, Lenophyllum pusillum, Senecio diversifolia, Cereus jusbertii, and hundreds of other species for California Cotyledon and Dudleya, and any other succulents that can endure zero Fahrenheit temperature at least protected by cold frames. B. C. Saur, Ricknoll, Foster, Ohio.

Will exchange native Texas cacti and other cacti and succulent plants for Euphorbias and Cereus. Mrs. Aug. F. Behrens, R. 1, Box 90, Brady, Texas.

Wanted—Unusual cacti or succulents in exchange for others of equal value. Over 600 species to choose from. E. P. Bradbury, Fontana, California.

Want to exchange for Euphorbia and all succulents and rare cacti. Will send you anything in the cacti line from Texas, New Mexico, and Arizona. Station A, Box 104, El Paso, Texas.

Exchange Euphorbia, correspondence solicited. R. E. Pickering, Pickering Bldg., Kansas City, Mo.

Will exchange Euphorbia natalensis for Euphorbia hermantiana. G. A. Frick, 5922 Tipton Way, Los Angeles.

★ ★ ★

## ADVERTISEMENTS BRING RESULTS

Am enclosing my check for continuance of my "ad" in the next issue of the *Journal*. We had six inquiries from the first one, two calls and four letters.—R. B. WHITFIELD.

R. F. Kado, of Wilshire Rockcraft and Cactus Garden, informed the president that her $4.00 advertisement in the Cactus Journal resulted, to her definite knewlodge, in two sales aggregating $26.00 in two days.—Ed.

★ ★ ★

Col. Perie Kewen gave us an impromptu talk on "Cacti As a Hobby." We all enjoyed the Colonel's talk; he should have been a Senator. His wonderful flow of oratory would have been a great aid to our dry law makers, providing of course that the Colonel had been converted to their way of reasoning.